

Two New California *Catocala* Subspecies (Noctuidae)

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Abstract. *Catocala andromache* subsp. *wellsi* Johnson, with nearly black body and forewings, from Jackson, Amador Co., CA, and *Catocala mcdunoughi* subsp. *browerorum* Johnson, with dark gray-brown body and forewings, the wings suffused with green scales, from Moore Creek Campground, Calaveras Co., CA, both localities in the northern Sierra Nevada Range, collected by R. E. Wells, are described, the types being deposited in the A. E. Brower collection, Augusta, Maine.

Catocala andromache (Hy. Edwards 1885) was described from a specimen from "near San Bernardino," California. Southern California specimens from Kern River Canyon in the southern Sierra Nevadas, the Santa Ynez Range in Santa Barbara County, to San Diego County are quite uniform with brownish-gray primaries, the maculation even, pattern lines distinct, and patches of green scales suffusing the wings in green, varying in the same locality from slightly green to nearly leaf green in fresh specimens, the green fading in aging outdoor specimens and in storage in light-proof cabinets. *Catocala benjamini* (Brower, 1937), described as an *andromache* subspecies, elevated to species rank (Brower, 1982), differs in smaller size (Johnson and Walter, 1978), paler coloration, absence of green scaling (Brower, 1937), in ovum sculpturing, and in a larva unique from *andromache* from the first instar onward (Johnson, 1981).

Ralph E. Wells took two males and a female at Jackson, Amador County, California, that clearly represent a distinct northern California population of *andromache* of subspecific rank deserving recognition and description.

Catocala andromache wellsi Johnson new subspecies

Holotype female: antennae dark gray, head, thorax grayish black with scattered yellowish-brown scales, fore and middle legs greyish black, rear legs lighter, abdomen proximally lighter, caudal two-thirds dark gray-brown; primaries above dark gray, nearly black, green scales suffusing the wings, line patterns obscured and in low contrast, t.a. line double, black, a black shade through the reniform spot to the posterior part of the t.p. line, t.p. line black, silhouetted outwardly by lighter scales, s.t. line black, subreniform spot pale gray, very conspicuous (not so in allotype). Lower surfaces much as in type subsp. but orange color more vivid, darker shades blacker, contrasts greater. Secondaries above yellow-orange, more vivid,

median black band strong, reaching inner margin black shading, inner margin black, fringe darkened, wing bases more heavily black scaled; lower surfaces more contrasting, orange brighter, dark areas blacker than in subsp. *andromache*. Forewing costal margin length 24 mm. Collected 19 June 1979 by Ralph E. Wells at ultraviolet light, Jackson, Amador County, California, 318 m elevation.

Allotype male: much as in holotype, antennae, legs, body grayish-black; primaries above grayish-black, patterns obscured, green scales suffusing the wings, subreniform spot inconspicuous; beneath darker, more contrasting than in type subsp. Secondaries above and below as in holotype, orange more vivid, dark areas blacker than in subsp. *andromache*. Length of forewing costal margin 23 mm. Collected 22 June 1977 at ultraviolet light, by R. E. Wells, Jackson, Amador County, California, 318 m elevation.

Holotype and allotype to be deposited in the A. E. Brower collection, Augusta, Maine. One paratype male, 16 June 1977, Jackson, Amador County, California, 318 m elevation, by R. E. Wells, in R. E. Wells collection.

Catocala andromache wellsi (Figure 1) is readily separable from subspecies *andromache* by the grayish black antennae, body, and nearly black forewings with low contrasts and obscuring of patterns, and the darker tones of the hindwings and under surfaces. All three specimens are much alike, the female holotype being blackest. Efforts to secure more specimens are continuing. Further search should discover the distribution of the subspecies in northern California. It is a pleasure to name the subspecies for its discoverer, Ralph E. Wells, an active and able field observer and collector of Lepidoptera for many years.

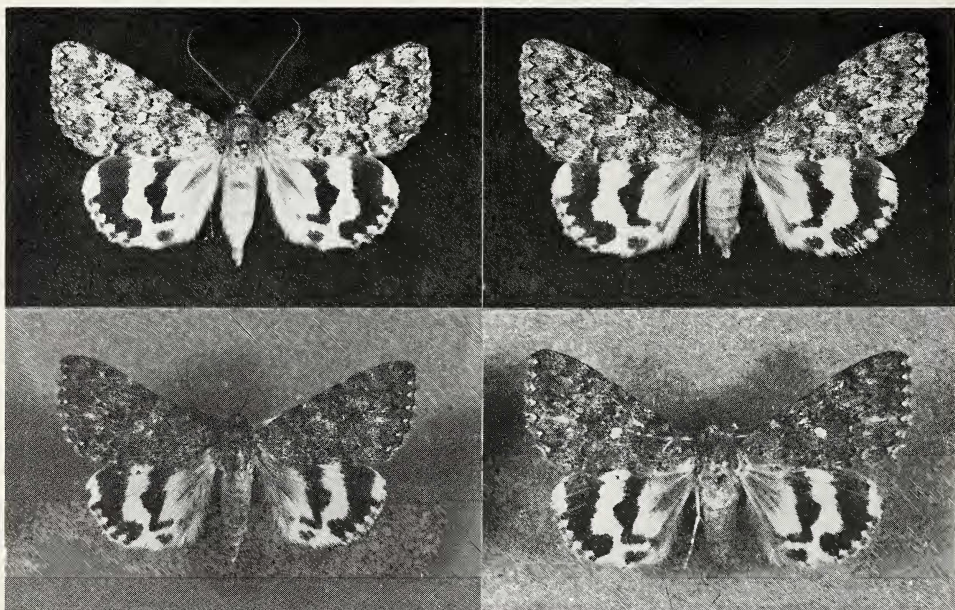


Fig. 1. Above: *Catocala andromache andromache* Hy. Edw., ♂ left, ♀ right. Below: *Catocala andromache wellsi* Johnson, ♂ allotype left, ♀ holotype right

Catocala mcdunnoughi browerorum Johnson new subspecies

Holotype female: antennae brownish black, head, thorax, fore and middle legs very dark brown, with long, black, hoary-tipped setae, these forming a tuft at thorax dorsal caudal margin, and smaller tufts on abdominal segments 1 and 2 dorsa. Abdomen dark brown, paler anteriorly, ventrally dark gray brown. Pimaries above dark brown, contrasts in pattern reduced, the wings suffused with patches of green scales; wing bases dark brown, t.a. line strong, black, edged by light gray scales proximally, pale area between line and reniform spot less distinct, subreniform obvious, but darker; t.p. line strong, black, in less contrast with background, s.t. line narrow, medium gray, black bordered, wing submargin dark brown, intervein lunules dark, subdued; lower surfaces much as in type subspecies, contrasts in orange bands and dark areas greater. Secondaries much as in type subspecies, but orange more vivid and black bands, black scaling at wing bases and along inner margins stronger, outer margin lunules darker, apical white spot smaller; lower surfaces much as in species, somewhat darker and more contrasting. Forewing costal margin length 26 mm. Collected 15 July 1979, Moore Creek Forest Service Campground, Amador-Calaveras Cos., California, elevation 975 m, at ultraviolet light by R. E. Wells.

Allotype male: much as in holotype, antennae nearly black, head, thorax, fore and middle legs dark brown with long, black; hoary-tipped setae, tufted at thorax dorsal caudal edge and on dorsa of abdominal segments 1 and 2; abdomen dark brown above, paler anteriorly, gray-brown below; primaries above as in holotype, dark gray-brown, pattern lines black, in low contrast to background, reniform spot less obvious, subreniform reduced, marginal lunules heavily black outlined, fringes darker, wings with obvious green scaling; below darker, more contrasting than in type subspecies. Secondaries as in holotype, orange vivid, dark areas blacker, greater contrasts above and below than in types subspecies. Forewing costal margin length 25 mm. Collected 14 July 1979, at ultraviolet light, Moore Creek Forest Service Campground, Amador-Calaveras Cos., California, elevation 975 m, by R. E. Wells.

Holotype and allotype to be deposited in the A. E. Brower collection, Augusta, Maine. Two paratypes, males, 20 June 1981, 4 July 1981, Moore Creek Forest Service Campground, Amador-Calaveras Cos., California, elevation 975 m, by R. E. Wells, in R. E. Wells collection.

Catocala mcdunnoughi mcdunnoughi (Brower, 1937) was named from a type series from Mount Lowe and Mount Wilson, Los Angeles Co., California. Throughout the southern California coastal mountains above 1524 m the species may be taken in woodlands containing *Quercus chrysolepis* Liebm. (Johnson, 1981). The southern California population is highly uniform, forewings predominantly brown, patterns of moderate contrast, and green sclaing never present. The four specimens taken by R. E. Wells differ strikingly from those of southern California in the grayish-black darkening of the brown coloration, reduced pattern contrasts, and the green scaling suffusing the wings. In northern California is present a previously uncollected and unrecognized population of subspecific rank (Figure 2). Efforts continue to secure more specimens and to explore the distribution of subspecies *browerorum*. The author is pleased to name this distinctive subspecies for the species' author, Dr. A. E. Brower, lifelong student of American *Catocala*, and Mrs. Lurana Brower, able assistant to her husband.

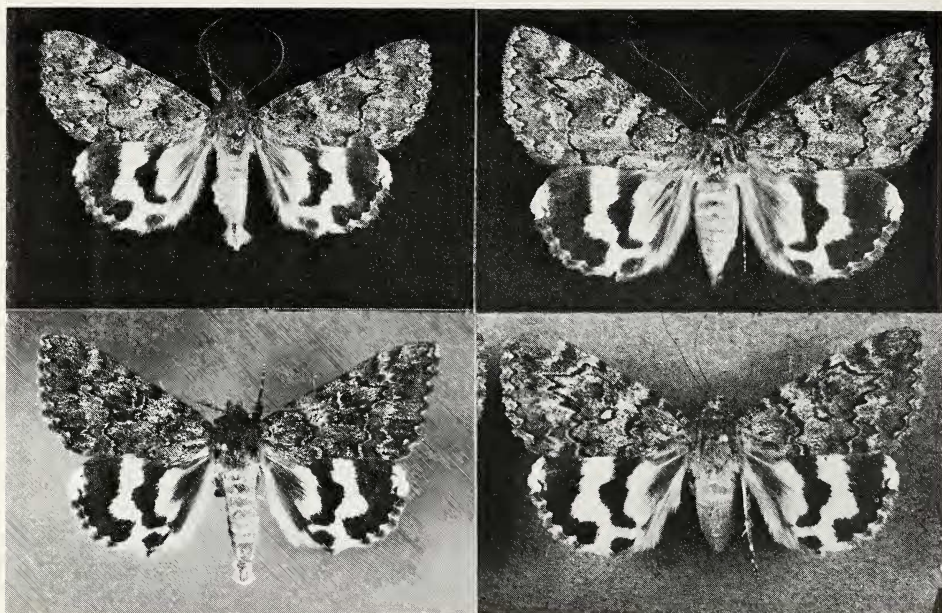


Fig. 2. Above: *Catocala mcdunnoughi mcdunnoughi* Brower, ♂ left, ♀ right. Below: *Catocala mcdunnoughi browerorum* Johnson, ♂ allotype left, ♀ holotype right.

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